

(No Model.)

2 Sheets—Sheet 1.

G. MARZARI.

GAME APPARATUS.

No. 331,419.

Patented Dec. 1, 1885.

Fig. 1.

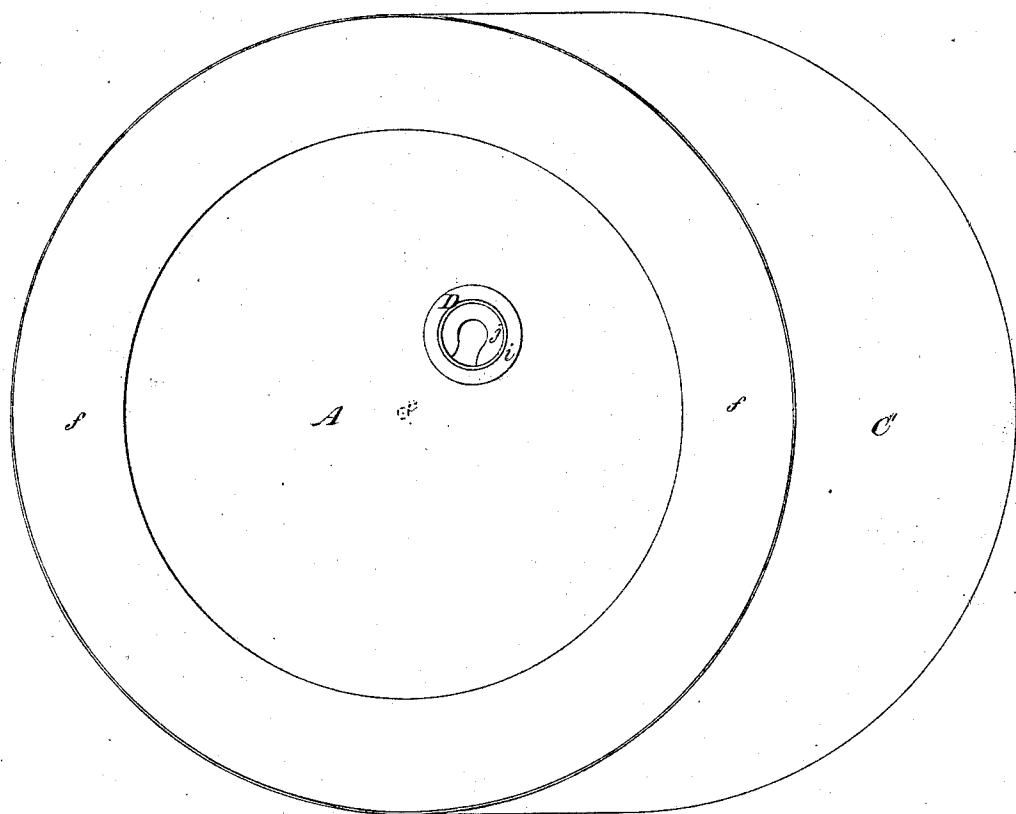
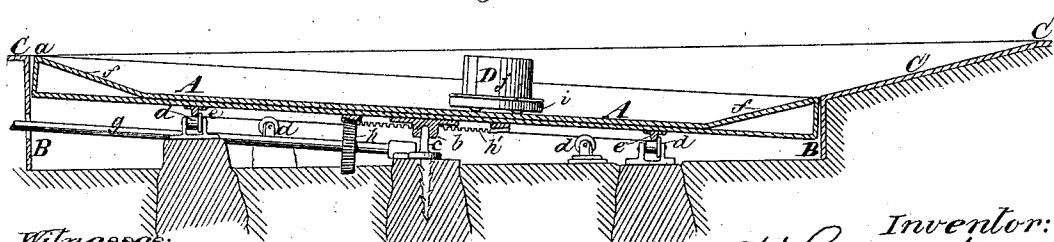


Fig. 2.



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By his attorney
Brown & Ball

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

Patented Dec. 1, 1885.

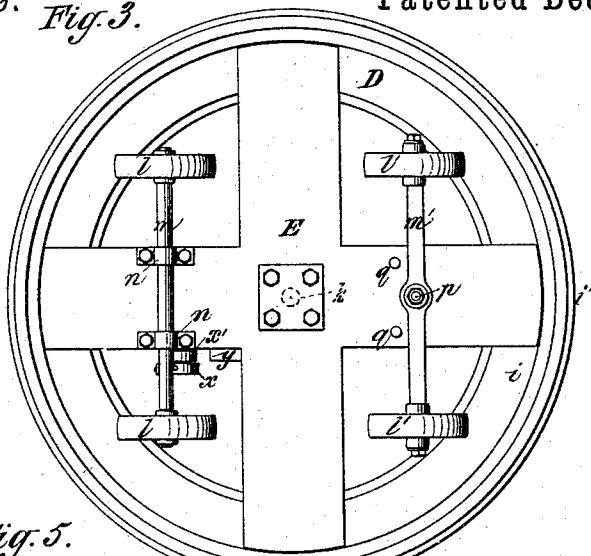


Fig. 5.

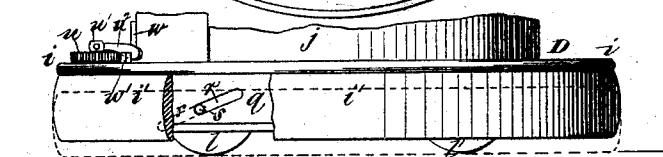


Fig. 4.

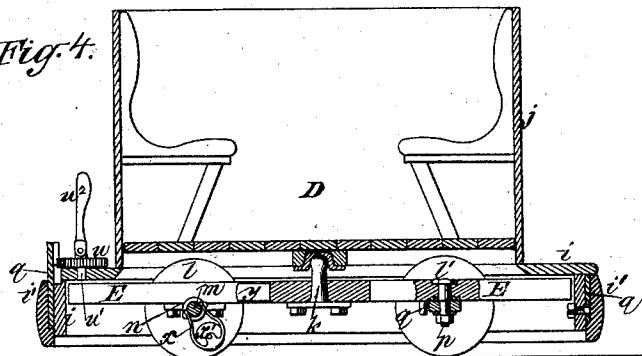
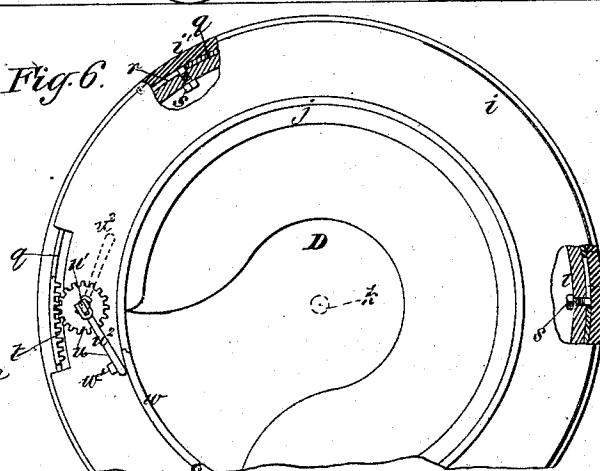


Fig. 6.



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UNITED STATES PATENT OFFICE.

GIUSEPPE MARZARI, OF NEW YORK, N. Y.

GAME APPARATUS.

SPECIFICATION forming part of Letters Patent No. 331,419, dated December 1, 1885.

Application filed September 14, 1885. Serial No. 177,033. (No model.)

To all whom it may concern:

Be it known that I, GIUSEPPE MARZARI, a subject of the King of Italy, residing in the city and county of New York and State 55 of New York, have invented a new and useful Game Apparatus, of which the following is a specification, reference being had to the accompanying drawings.

The principal feature of this invention, 10 which I call a "crazy-rink," consists in the combination of a rotary inclined platform and one or more cars placed thereon and adapted to run either across or around said inclined plane or in various directions there- 15 on by gravitation.

The invention also consists in a certain construction of the running-gear of such cars in combination with said rotary inclined plat- form.

20 It also consists in certain means of stopping the cars on said platform to permit the entrance of passengers thereto and their exit therefrom.

25 It also consists in certain means of controlling the opening and closing of the doors of said cars, whereby when the cars are free to run the doors are locked.

30 It also consists in certain means of controlling the speed of the cars on the platform within certain limits.

It further consists in certain details of construction, hereinafter described and claimed.

Figure 1 in the drawings is a plan of the inclined rotary platform and a car thereon.

35 Fig. 2 is a central vertical sectional view corresponding with Fig. 1. Fig. 3 is an inverted plan of one of the cars. Fig. 4 is a central vertical section of the same. Fig. 5 is a side view of the lower part of one of the cars,

40 showing part of the exterior broken away to expose the part behind it. Fig. 6 is a plan view of part of the car, showing portions bro-

ken away to expose the parts below.

Similar letters of reference indicate corre-

45 sponding parts in the several figures.

A is the rotary inclined platform, of circu-

lar form, arranged within a shallow pit, B, and having its highest point *a* about on a

level with the surrounding ground or floor C.

50 To the under side of this platform there is

secured a central socket or hub, *b*, which fits

on a stationary pivot, *c*, which is firmly se-

cured in the ground or in any suitable fixed support, and about which the said platform turns freely, the said platform being further 55 supported by a series of anti-friction wheels, *d d*, which are arranged in fixed bearings below it, and which receive upon their peripheries a ring, *e*, which is firmly secured to the platform. The said platform may be about 60 fifty feet in diameter, and its face presents an unbroken plane surface, with the exception that the marginal portion or rim *f*, of the width of about six feet, (which is about that of the width or diameter of the cars D, to be here- 65 inafter described,) has an upward inclination from the said plane surface, the object of such inclination of the rim being to prevent the cars D from running off the platform.

Rotary motion about the pivot *c* may be 70 given to the platform by any suitable means. I have represented for this purpose in Fig. 2 a driving-shaft, *g*, furnished with a gear, *h*, gearing with a toothed ring, *h'*, fastened on the under side of the platform. That part of 75 the floor C which is nearest the lowest part of the edge of the platform A is slightly inclined, as shown at C', to be flush with the edge of the platform, to facilitate the running of the cars on and off the platform and the entrance 80 and exit of passengers to and from the cars.

The cars D, of which there may be any number, have their bodies of circular form, the base *i* projecting all around the upper portion, *j*, within which the passengers are inclosed or 85 protected by a railing. This projecting base is surrounded by a ring, *i'*, of india-rubber or other elastic material, which serves as a buffer to reduce the shock to which each car may be subject by running against or being run against 90 by other cars.

The circular car-body, which may be of about six feet diameter, is supported centrally on a pivot, *k*, which is firmly secured in the center of a truck, E. The truck is represented (see 95 Fig. 3) as being made in form of a cross. It is supported on four wheels, *l l l l'*, of which

two, *l l*, are fast on an axle, *m*, which turns in boxes *n n*, secured fixedly to the truck, and the other two, *l' l'*, are loose upon an axle, *m'*, 100 which is pivoted to the truck by a king-bolt, *p*, upon which it is free to move unrestrictedly to a certain distance, beyond which it is prevented from moving by means of two stops,

q *q*, secured to the truck. The car-body, being pivoted centrally to the truck, and the truck being mounted on the two axles, one of which has its axis fixed, and the other of which has the limited movement on a king-bolt, is caused to run about the rotary inclined platform in the most amusingly erratic manner by gravitation when rotary motion is given to the platform, and when several cars are on the platform together they will by running in all sorts of directions bump each other in a very amusing manner, but without injury to passengers, the inclination and size of the platform being such that the momentum they acquire will not be so great but that injury will be prevented by the annular buffer *i'*, or by the checks, hereinafter described, applied to the axle *m*. The lower part, *i*, of the car-body is fitted with a surrounding brake-ring, *q*, which is free both to turn and to move up and down some distance thereon under the control of three or more oblique slots, *r r*, provided in the said ring, and fitted to as many pins or studs, *s s*, which are secured in the periphery of the base *i*. The turning of the brake-ring *q* in one direction causes it to move upward on the studs *s s* to the position shown in Fig. 4 and in bold outline in Fig. 5, but by turning it in opposite direction it is caused to move downward on the said studs, as indicated in dotted outline in Fig. 4, for the purpose of making it act as a brake by pressure on the face of the platform *A* or upon the floor. The india-rubber buffer-ring *i'* is secured to this brake-ring *q*, and made to project below it, and is thereby made to serve as a brake-shoe as well as a buffer. The purpose of this brake is to keep the car stationary on the platform when the latter is stopped to permit passengers to get in and out of the cars, or to keep the car stationary on the part *C'* of the floor if it be desired to load and unload there.

To provide for turning the brake-ring *q* on the part *i* of the car-body, a portion of the inner circumference of the ring is furnished with cogs, as shown at *t* in Figs. 4 and 6, and geared with a pinion, *u*, on a short upright shaft, *u'*, fitted to bearings in the car-body, and the upper part of this shaft is furnished with a hinged handle, *u''*, by which to turn it by hand. The relative positions of this shaft *u'* and the hinged door *w*, by which the passengers enter and leave the car, are such that when the said shaft has been turned to a position for its pinion to lift up the brake-ring the hinged handle *u''* may be dropped down, as shown in Fig. 5 and in bold outline in Fig. 6, between the closed door *w* and a short post or stud, *w'*, fixed in the part *i* of the car-body, and so secure the door to prevent the passengers from getting out of the car while the latter is in motion; but when the handle has been

lifted above this post and the shaft and pinion have been turned by it to the position shown in dotted outline in Fig. 6 to depress 65 the brake-ring the door may be opened.

In order to stop the car automatically in case of its acquiring too great speed, the axle *m* may be, and is represented in Figs. 3 and 4 as, furnished with a roller or block, *x'*, which 60 is attached to the said axle by a looped spring or elastic metal loop, *x*, (best shown in Fig. 4,) and the car-truck *E* has firmly secured to it a stop, *y*. While the speed is not too great the roller or block *x'*, in its revolution with 75 the axle, passes clear of the stop; but when the speed is too great the increased centrifugal force developed in the said roller or block and the spring causes the loop of the latter to elongate sufficiently for the roller or block to 80 strike the stop *y*, and so check the car until its speed is reduced to a proper degree.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of a rotary inclined 85 platform and a car consisting of a truck and a body pivoted thereto, substantially as herein described.

2. The combination, with the rotary inclined platform, of a car, one of whose axles 90 is attached by a king-bolt, and which is furnished with stops to limit the otherwise free movement of the axle on the king-bolt, substantially as herein described.

3. The combination, with the circular car-body, of a surrounding brake-ring and means, substantially as herein described, of raising and lowering the said ring, as herein set forth.

4. The combination, with the circular car-body, of the surrounding brake-ring furnished 100 with an external elastic ring, which surrounds and projects below it, to serve as a buffer and as a brake-ring, substantially as herein described.

5. The combination, with the car body and 105 door, of a surrounding rising and falling brake-ring furnished with gearing, a pinion and shaft fitted to the car-body and gearing with said gearing on the ring, a hinged handle attached to said shaft for turning the same, and a stop 110 on the car-body between which and the closed car-door the said handle may drop to lock the said door when the brake-ring is raised up, substantially as herein described.

6. The combination, with the car-truck and 115 its axle *m*, of the loop-spring *x* and attached roller or block *x'*, carried by said axle, and the stop *y*, attached to the car-truck, substantially as and for the purpose herein set forth.

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Witnesses:

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